

Claims

1. A multilayered liposome for transdermal absorption which is capable of entrapping a physiologically active substance, wherein the liposome is prepared using a mixture  
5 of oil-phase components comprising 0.1 to 10.0 wt% of squalane, 0.1 to 5.0 wt% of sterols, 0.1 to 10 wt% of ceramides, 0.1 to 20.0 wt% of neutral lipids or oils, 0.1 to 20.0 wt% of fatty acids and 0.1 to 5.0 wt% of lecithins, based on the total weight of the liposome, and is 200 to  
10 5000nm in particle size.

2. The multilayered liposome according to claim 1, wherein the particle size ranges from 200 to 1500 nm.

3. A method of preparing multilayered liposomes for transdermal absorption, comprising:

- 15 (a) dissolving oil-phase components, comprising squalane, sterols, ceramides, neutral lipids or oils, fatty acids and lecithins, at 50°C to 75°C;  
(b) dissolving aqueous-phase components at 50°C to 75°C; and  
20 (c) mixing the components dissolved at steps (a) and (b) and agitating a resulting mixture at 500 to 9000 rpm (revolutions per minute) to form multilayered liposomes having a particle size of

BEST AVAILABLE COPY

200 to 5000 nm.

4. The method according to claim 3, wherein the squalane is used in an amount from 0.1 to 10.0 wt%, the sterols in an amount from 0.1 to 5.0 wt%, the ceramides in  
5 an amount from 0.1 to 10 wt%, the neutral lipids or oils in an amount from 0.1 to 20.0 wt%, the fatty acids in an amount from 0.1 to 20.0 wt%, and the lecithins in an amount from 0.1 to 5.0 wt%, based on the total weight of the liposomes.

10 5. The method according to claim 3, wherein the particle size ranges from 200 to 1500 nm.

6. The method according to claim 3, wherein the agitation is carried out at 2000 to 4000 rpm.

7. The method according to claim 3, further  
15 comprising secondarily disrupting and mixing the multilayered liposomes by passing the multilayered liposomes through a high-pressure homogenizer.

8. A multilayered liposome for transdermal absorption, prepared according to the method of claim 3.

20 9. A composition for transdermal absorption,

comprising the multilayered liposome of claim 1 or 8  
entrapping a physiologically active substance.

10. The composition according to claim 9, wherein the  
physiologically active substance is selected from among  
5 proteins, peptides, nucleic acids, natural extracts,  
synthetic compounds, sugars, vitamins and inorganic  
materials.

BEST AVAILABLE COPY